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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,971	08/31/2001	Sridhar Sadasivan	83173HEC	2204

7590 05/21/2003  
Paul A. Leipold  
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Rochester, NY 14650-2201

EXAMINER

GRENDZYNSKI, MICHAEL E

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/21/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/944,971

Applicant(s)

SADASIVAN ET AL.

Examiner

Michael E. Grendzynski

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The use of the phrase “at least about 50 mole percent” renders the claims ambiguous. One skilled in the art is unable to ascertain the lower threshold limit; consequently, the metes and bounds of the claims cannot be ascertained. It is suggested applicant delete the term “about” from the phrase.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, and 4-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa (US 5750200) in view of Sugiyama (US 4371582). Applicants claim a ink-receiving element comprising (1) a substrate and (2) a porous image-receiving layer thereon, wherein the image-receiving layer comprises (a) particles having a mean particle size of greater than 0.04 to about 5  $\mu\text{m}$ ; (b) water insoluble cationic particles comprising at least 20 mole percent of a cationic mordant moiety; and (c) up to 20 wt% binder. Ogawa discloses an ink jet recording sheet comprising (1) a support, (2) an ink-receiving layer, and (3) a gloss-providing layer. See

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Abstract. The gloss-providing layer is equivalent to applicants' porous image-receiving layer. It comprises a binder and pigments having a particles size falling within applicants' claimed values. *See* col. 8, ll 36-39 and col. 9, ll 6-8 (disclosing a particle size of less than 300 nm (0.3  $\mu$ m)). In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). *See* MPEP § 2144.05. Applicants can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range. *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990); *see also* MPEP § 2144.05. The binder of the gloss layer comprises a latex polymer. *See* col. 11, ll 3-7. While not limiting the type of latex polymer that may be used, and while disclosing that functional group modified latexes are included as binders (*see* col. 11, ll 8-17), Ogawa does not specifically disclose the use of a latex comprising at least 20 mole percent of a cationic mordant moiety. Sugiyama teaches that using a basic polymer latex having the formula  $(A)_x(B)_y(C)_z$  provides a recording sheet with improved image-forming properties, since the images formed thereon do not dissolve and retain a high degree of water resistance. *See* Abstract; col. 4, ll 23-41; and col. 3, ll 51-64. This latex is equivalent to applicants' latex comprising at least 20 mole percent of a cationic mordant moiety--in the formula, A comprises a cationic monomer (e.g., a quaternary ammonium salt) present in an amount of within applicants' claimed range ( $x = 10-99$  mol %). *See* Abstract. It would have been obvious to use the basic latex polymer of Sugiyama as the modified latex of the Ogawa gloss-providing layer, motivated by the desire of providing images excellent in water resistance, as taught by Ogawa on col. 3, ll 51-58.

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With regard to claim 2, Ogawa discloses the ratio of the latex to the pigment particles within ranges that overlap applicants' claimed ranges. *See* col. 11, ll 20-35 (disclosing the amount of latex is 2-70 parts by weight per 100 parts colloidal particles).

With regard to claims 4 & 5, since the value "up to 20 wt%" includes 0% (i.e., no binder present), this claim is not dispositive on the issue of patentability.

With regard to claims 6-8, Ogawa discloses the use of colloidal silica particles. *See* col. 8, ll 60-63.

With regard to claim 9, Ogawa discloses the use of organic particles. *See* col. 8, ll 66-67.

With regard to claim 10, *see* col. 8, ll 56-60.

With regard to claims 11, 12 and 14, *see* Sugiyama at col. 4, ll 22-45 (disclosing a latex having a quaternary ammonium group).

With regard to claim 13, Ogawa discloses that its latex polymer possesses a particles size overlapping applicants' claimed size. *See* col. 11, ll 17-20.

With regard to claims 15 & 16, the Ogawa ink-receiving layer is equivalent to applicants' base layer—it comprises a pigment (e.g., silica) and a binder. *See* col. 6, ll 38-54.

With regard to claim 17, Ogawa discloses an amount of pigment that overlaps applicants' claimed value. *See* col. 7, ll 66 through col. 8, ll 5.

With regard to claim 18, *see* Sugiyama at col. 4, ll 39-41 (disclosing the amount of the cationic monomer in an amount of 10-99 mol%).

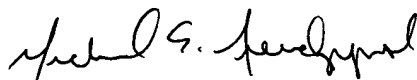
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***Conclusion***

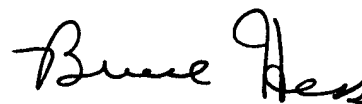
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael E. Grendzynski whose telephone number is 703-305-0593. The examiner can normally be reached on weekdays, from 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703-308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2351.



Michael E. Grendzynski  
Assistant Examiner  
May 13, 2003



BRUCE H. HESS  
PRIMARY EXAMINER